A DEMONSTRATION OF COMMERCIALLY SUSTAINABLE FINFISH AQUACULTURE

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SUMMARY

Marine finfish aquaculture is an established profitable agribusiness in Asia, South America, and Europe. The United States has recently started to tap into its potential. Great Bay Aquafarms, Inc., EPRI, Public Service of New Hampshire and Northeast Utilities jointly funded a demonstration of land-based marine finfish aquaculture using recirculating technology .The study used two tanks with two different independent life support systems that operated over a period of 15 months. The systems used two different modes of biofiltration. The two types of biofilters used were a fluidized sand bed and a mixed bed using novel plastic media.

Objective

The project objectives included:

- To demonstrate and assess the performance of a pilot scale commercial recirculating system for marine flatfish.
- To design in conjunction with PSNH, an innovative and efficient heat exchange system for sea water which will result in year round optimum culture conditions through the capture of waste heat produced as a byproduct of electrical generation.
- To lay the groundwork for a larger scale aquaculture park and public information center.

Approach

Juvenile flounder were stocked in the tanks for discrete study periods. Different parameters such as growth, feeding rate, FCR and water quality were monitored, evaluated, and reported. Different filtration equipment used was also evaluated.

Operational costs were the electrical running costs of the major tank components, and an analysis of pH buffer chemical and feed costs.